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correspondence courses by a random sample
of navy personnel ..

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JOHNSEN

AN INVESTIGATION OF THE
PARTICIPATION IN USAF
CORRESPONDENCE.

Thesis
J55

NORTHWESTERN UNIVERSITY

AN INVESTIGATION OF THE PARTICIPATION IN
USAFI CORRESPONDENCE COURSES BY A
RANDOM SAMPLE OF NAVY PERSONNEL

A THESIS

SUBMITTED TO THE GRADUATE SCHOOL
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE
MASTER OF ARTS

DIVISION OF CORRELATED STUDIES

BY

WILLIAM H. JOHNSON
EVANSTON, ILLINOIS
AUGUST, 1948

Library
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Annapolis, Md.

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INTRODUCTION TO THE PROBLEM

History

In 1942, at the Naval Station in Guantanamo Bay, Cuba, the United States Navy embarked on a program of combatting low morale among the enlisted personnel of that station who had too much spare time and too few satisfying means of utilizing it. A survey of the men on the station indicated that they were eager to continue their education, to engage in perfecting their hobbies, to improve their proficiency either for service in the Navy or for their return to civilian life. From this small beginning, made at Guantanamo Bay, the program grew until it pervaded the entire naval establishment, serving naval personnel -- officers and enlisted -- both men and women wherever they were located; it often followed the men ashore scant weeks behind the combat teams which assaulted the beach heads and secured them in our advance across the Pacific.

In the demobilization period large numbers of men and officers availed themselves of the Navy Educational Services in order to combat the monotony of waiting for transportation, to allay their fretfulness occasioned by unavoidable delays, and to assist them in their preparation for return to civilian life. Many felt the need for

greater educational background to such an extent that huge study centers, offering courses in over six hundred subjects, developed very rapidly. Correspondence courses and self-study texts were often used to provide for individual differences so that these educational opportunities could be made available where no community of thought or interests was recognized. They further provided opportunities to individuals wherever they might be, from the Arctic wastes to the tropical jungles, from a desk in the Bureau of Naval Personnel to the coast watcher's post on the Island of Luzon in the Philippines.

In the initial stages of the program the Navy obtained its course materials by purchasing standard textbooks on the open market, but late in 1942 forces were joined with the Army Institute which changed its name at that time to the United States Armed Forces Institute, now commonly referred to as "USAFI". This early relationship has become more and more tightly knit and coordinated until today it has become one of the more nearly merged of all the Armed Forces Operations.

USAFI is administered by the War Department. Funds and personnel of the Navy and Air Forces contribute materially to the success of this educational institution, probably the largest in the land. The policy control of this Institute rests in the Armed Forces Committee, which includes eleven leading civilian educators as well as

members of the Armed Services. This committee coordinates the program with civilian education and advises the services concerning sound educational practices.

The basic objective of the program, that of combatting low morale, has remained the cornerstone around which the services have developed. However, the Navy today has become so technical that a real need for background education has arisen. In addition, greater attention has been focused on courses in citizenship.

To achieve these objectives the Navy offers all personnel opportunities for study and educational development. For those who plan to remain in the Navy, this means an opportunity to engage in work related to the technical aspects of their Navy rates, and to assist them in achieving greater competence in those rates, leading to possible promotion. For those anticipating return to civilian life it means educational opportunities designed to facilitate their readjustment to that same civilian life. For all of them it provides facilities for development of recreational and avocational interests of an educational nature.

Since a study of the entire scope of the educational opportunities offered by the Navy through the Educational Services Section, Training Activity, Bureau of Naval Personnel would be much too extensive, only a phase of the operation will be covered, that of USAFI Correspondence Courses, using USAFI text materials solely.

Need for the Study

Since this program was initiated only one Navy study has been made. In 1944 the Bureau of Naval Personnel made an over-all study of the effectiveness of Educational Services. Their conclusions with respect to correspondence and self-teaching courses were:

1. One man in five participated in the program.
2. Of these 47% rated their study very valuable.
3. Of these 2% rated their study as a waste of time.
4. Post war jobs and personal interests were the two chief interests of the men.
5. Next from the point of view of motives were: the desire to learn more about their Navy jobs, and the hope of getting high school or college academic credit for their work while in the service.'

There is now a need for a re-examination of the problems of administering and participating in this correspondence course work because: 1. The personnel of the peacetime Navy is different than that of the wartime Navy; they have different interests and quite different motives for joining the present Navy. 2. Correspondence course study assumes a more important place in the picture at the present time because there are fewer personnel available to administer organized classes or to devote their entire time to the program on board ship or at their shore stations. 3. There are fewer large concentrations of men awaiting transportation, so that the opportunity to discover a

'Navpers 16926 Sept 1945 Report #5 Information Survey 2 Research project #432. Supers Training Standards and Curriculum Division Test and Research Section.

community of interests from which an organized class could be built up does not exist as was the case so frequently during the war and demobilization period. 4. Educational Services Officers now perform their duties on a collateral duty basis; they cannot devote the major portion of their time to the administration of the program and in many cases they may not only have the disinclination but may be lacking in competence as well. 5. The increased technical aspects of the Navy require sailormen who are academically competent in a degree never before imagined. 6. The Navy has for many years used correspondence courses as a means of training its officers and men, and problems in this area of training are certainly related to such an extent that whatever may develop in the following study may be of use in estimating the efficacy of such methods.

Purpose of the Study

The following pages are based on an investigation of random sampling of naval personnel who enrolled in USAFI correspondence courses between 1 May, 1947 and 30 April, 1948, to discover if there are certain general characteristics of the Navy personnel enrolled for courses; to determine whether or not there is any relationship between enrollees' selection of courses and their age, education, type of rate held, ship or duty station to which assigned, and future plans; to ascertain whether or not any relationship exists between the number of lessons completed and the

average length of time to complete the lessons, the reaction to the instructor's comments, number of lessons and length of lessons considered desirable, help needed by the enrollees and the source of this help, help in the choice of courses, value of USAFI to the enrollees; to discover the relationship between their reasons for enrolling and their estimate of the value of the courses to them, their desire to take other courses, their knowledge of others who are taking courses, and their influence on others to take courses, and to reveal their stated opinions concerning selected phases of the study.

SELECTION OF SAMPLE AND COLLECTION OF DATA

Selection of Sample

Materials for this investigation were secured from the records of a sampling of Navy enrollees selected from the files of the United States Armed Forces Institute, located at Madison, Wisconsin, and from replies to questionnaires sent each of the enrollees of the above-mentioned sampling.

Without the use of the IBM records maintained by USAFI, this study could not easily have been undertaken. The data obtained was listed under three major headings; active enrollees, completed enrollees, and disenrolled persons. Under each of these headings the following information was given: a. Date of birth, b. Educational background, c. Whether officer or enlisted status, d. Length of time in service. The sampling technique used is as follows:

Active Enrollees -- The total population was 10,889, representing Navy enrollees who signed up for USAFI correspondence courses from the 1st of May, 1947 to the 30th of April, 1948, inclusive.

The population (10,889), was sorted on the basis of the last digit occurring in the serviceman's serial

number. The serial number was chosen because it has no particular military or other significance; it is assigned to naval personnel at random. The population was sorted as follows:

Last digit	Number of cases	
0	1129	
1	1123	
2	1044	
3	1063	
4	1098	
5	1152	Used for this study
6	1055	
7	1095	
8	1068	
9	1062	
Total	10889	

Because of the nearly equal distribution over the range of the last digits it appears likely that any one or combination of the assortments would possess the characteristics of the entire population.

Of the 1152 cards found with 5 as the last digit 124 were discarded because of insufficient data. Therefore, 1028 cards were finally used in the analysis.

Completed Enrollees -- The total population of completion was used in this category, and equalled 368. This number represents those who enrolled in and completed a course between 1 May, 1947 and 30 April, 1948. Twenty-three of the record cards were incomplete and so were not used, leaving 345 cards which could be employed in the study.

Disenrollees -- One hundred and fifty-two disenrollees are submitted for this examination. The number

is relatively small and does not affect the over-all enrollee picture materially.

The sum of the number of enrollees taking courses during the period covered by this study therefore equals all three of the above categories, or 1525. Since some men were enrolled in different courses at the same time or had finished one course and started another, the number 1525 includes these duplications. The removal of duplications from the list reduced the figure from 1525 to 1353.

The limitations on the data submitted are: The active enrollee sample equals approximately ten percent of all individuals now enrolled; the completed enrollee category represents one hundred percent of the population. The information on the percent of the disenrollee cannot be ascertained because the period covered is not extensive enough to include the period of time necessary for a person to become a disenrollee in accordance with the policies of the Institute. This same deficiency pertains to determining rates of completion. Since these different categories cover different percentages of the population, they cannot be compared, but may be analyzed within themselves.

Interviews

A series of preliminary interviews was arranged through the Educational Services Officer at the Naval Training Station, Great Lakes, Illinois. The interviewees

were twenty-five enlisted men and officers who were enrolled in correspondence courses with USFI. The objective of these interviews was to develop the questionnaire that was ultimately sent to the sample described above. The cooperation and enthusiasm of everyone who helped arrange the interviews as well as the thoughtful cooperation of the interviewees themselves was very encouraging. The average interview consumed about an hour, and was generally fruitful in giving insight into why men were taking courses, what kind of men were taking them, and what satisfactions they were getting from the courses. It is felt that the final questionnaire was much better than it otherwise would have been if the interviews had not been conducted first. They served as an excellent check on these matters and highlighted many points that otherwise probably would have been missed. The data collected in the interviews is not used in this study except as a means of developing the questionnaires, they support no conclusions, and no recommendations are based on them directly.

Questionnaire

Thirteen hundred and fifty-three questionnaires were mailed on June 17, 1948, to Navy personnel on their ships and stations throughout the world; principally in continental United States and to ships on both coasts, but some questionnaires were sent to ships in the Mediterranean and in the Orient, to shore stations in the South Seas,

Alaska, and Newfoundland as well. By July 15, 1948 five hundred and seventy-one of these had been returned completed, sixty-four were returned by the Post Office Department as undeliverable because of improper forwarding address. This represents a return of 42.2%. By including the 64 returned by the Post Office Department 50% of the sample are accounted for.

It is possible that the return would be materially increased if time permitted the use of a follow-up letter as well as an opportunity to wait a month longer for returns from overseas stations. The return of 42.2% yields such a variety of answers, however, that it is felt that the results are significant of the thought of the remaining ones who have not yet been heard from.

A probable reason for the failure of the mail service to deliver the 64 returned as undeliverable is that the man concerned has been discharged from the Navy within the year and has moved from the address that he had on discharge, leaving no forwarding address. The failure of the remaining 50% to return their questionnaires within the month can be accounted for in part by the distances involved, as well as to the fact that the operations of some of the ships are such that mail cannot get to or from them quickly. It is doubtful if a reward of any kind would have materially increased the number of responses.

The printed questionnaire was accompanied by a

letter addressed to the man personally. (See appendix, page 1). Every effort was made to identify the questionnaire with USAFI and to play down the fact that the investigator was an officer. This was done first to enlist the cooperation of the person being questioned, and second, to try to encourage the man to answer as he felt and not as he might think an officer would expect him to feel. From the answers received, it appears that both of these goals were achieved. Each recipient of the questionnaire was sent an addressed envelope in which to return his reply; these were used in nearly all cases. However, five provided their own envelopes and air mail stamps because they thought they were late in getting their answers back to the investigator.

A study of the population taking correspondence courses with USAFI showed that it was widely dispersed in the naval establishment; Navy enrollees were afloat and ashore, performing the manifold duties required by their assignments within the Navy. Neither one or several places within reasonable travelling distance of Northwestern University could possibly be expected to give answers representative enough to be meaningful. Since the population was so dispersed it was felt that a questionnaire would provide access to a wider sampling than any other means currently available.

In tabulating the results several weaknesses

appeared in the questionnaire. For example: in question 12, in many cases the man checked more than one of the possible answers. The tabulation indicates only the first answer checked. Question 26 was unfortunately linked with questions 24 and 25; it would have been more meaningful if question 26 had read, "Do you feel that the Educational Services Program is as you expected it to be?" Questions 3 and 4 should have had more class intervals to be more significant in the final interpretation. Some confusion probably existed in the minds of the respondents concerning just where to check some of these answers.

TREATMENT OF DATA

A code was devised, the information in the questionnaires was categorized where necessary, and each questionnaire was coded accordingly. This code was then punched on IBM record cards. The thirty questions permitted thirty-three code columns to be used. The first recorded the rate/rank of the respondent; the second, type of ship or station to which he was attached; third, age of the respondent; fourth, school grade completed; fifth, length of time since leaving school; sixth, what level General Education Development Test he took, if any; seventh, why he took out a course; eighth, how many months ago he signed up for a course; ninth, how many lessons he has handed in to date; tenth, percentage of lessons completed so far (this was arrived at by dividing the answer to question 9 by number of lessons found in course indicated in question 28); eleventh, reasons for taking more than an average of three weeks in sending in a lesson; twelfth, the enrollee's estimate of the value of the course to him; thirteenth, why the enrollee evaluated USAFI usefulness as he did; fourteenth, by what means the enrollee heard about USAFI (some checked more than one item in the suggested answers, so in punching the cards only the first

or lowest numbered answer checked was punched); fifteenth, why the enrollee felt that USAFI could be of any value to him; sixteenth, enrollees' reactions to the instructor's comments; seventeenth, factors which the enrollee felt tended to lessen his interest in the course; eighteenth, length of lessons and number of lessons considered desirable by the enrollee; nineteenth, whether the enrollee got the help he needed; twenty-first, who helped the enrollee to choose the course; twenty-second, having taken a course does the enrollee desire to take any others; twenty-third, how many shipmates does the enrollee know who are taking courses; twenty-fourth, has the enrollee influenced anyone else to take a course; twenty-fifth, what are the enrollees' future plans; twenty-sixth, did the enrollee hear about USAFI before enlistment; twenty-seventh, did his knowledge of USAFI influence him to enlist; twenty-eighth, does the enrollee feel that the program is as he expected it to be; twenty-ninth, what Navy Service Schools has the enrollee attended; thirtieth, what level course is the enrollee taking -- high school, college, or technical; thirty-first, what kind of a course is the enrollee taking -- business, English, mathematics, science, social studies, vocational; thirty-second, what other courses does the enrollee plan to take; thirty-third, any other remarks made by the enrollee.

This coded data was sorted according to a plan to

provide tables 1 through 25.

The data thus obtained, together with the basic sample data obtained from USAFI Headquarters, was treated statistically to determine the mean, the standard deviation and standard error of the mean, and in some cases, the median. The assortments and statistical treatment developed certain characteristics, together with their reliability. Wherever the reliability of the characteristics seemed to warrant, conclusions were drawn and recommendations were made.

The original questionnaires were studied for the opinions of the enrollees and are quoted or referred to where they appear relevant to the discussion.

Definitions

Enrollee -- Any person in the Navy on active duty who applied for a correspondence course between 1 May, 1947 and 30 June, 1948.

Active Enrollee -- Any enrollee who submits at least one lesson within the six months period after enrollment or within six months after the submission of the last lesson.

Disenrollee -- Anyone who has applied for a course, received same and submitted no lessons: six months after date of enrollment and/or after six months of inactivity or has not completed same within 18 months.

Completed Enrollee -- He must make a passing score on an appropriate end-of-course test. For any correspondence course for which there is no end-of-course test an average score of 70 on all lessons satisfies the criterion.'

CHARACTERISTICS REVEALED BY THE DATA

The general purpose of the investigation reported in this section is to discover whether or not the enrollees' selection of courses for study or their persistence in studying the courses was affected by such characteristics as type of rate or rank held, ship or station to which attached, school grade completed, length of time since enrollee left school, age of enrollee, future plans of enrollee, length of time enrollee has been in the service.

Selection and Completion of Courses

It is important to have indications concerning the kinds of courses enrollees are interested in; whether they are active or have completed their courses or have been disenrolled. Table 1 (see appendix, page 6) shows the course areas in which enrollees of this sample were interested, the average number of enrollees per course, and the percent of enrollees who are found in each category.

67.7% of enrollees interested themselves in high school level courses during the last year, while 18.2% were engaged in technical work, and only 14.1% were taking college level courses.

In the high school level 20.6% took English courses

and 18.2% had worked on mathematics courses. It is possible that these percentages are higher than the others because English and mathematics are requirements for diplomas in most secondary schools. The most popular college level course was mathematics, in which 5.3% engaged. The comparatively large percentage of technically interested, 18.2%, indicates that these men are interested in improving their technical knowledge in order to become more proficient in their Navy billets, or they are preparing for a return to civilian life.

The five most frequently chosen courses in each of the educational areas -- high school, college and technical -- are listed in table 1a of the appendix, page 7.

It is noted that the traditional academic subjects of both the high school and college level outrank the technical courses. Here again it seems that high school level courses are requested primarily for the purpose of qualifying for a high school diploma since social studies, particularly American History, are specific high school requirements in most states. In the technical field it appears that the enrollees are most concerned with automotive courses and Diesel engines. It is interesting to speculate as to whether they study these courses for greater proficiency in their Navy job, for an increased competence along those lines on return to civilian life, or merely to satisfy a desire to repair their own auto-

mobiles.

From an independent study made by USAFI it was learned that the more popular courses at the high school level were:

(1) American History, (2) Beginning Algebra, (3) Basic Mathematics, (4) 9th grade English, (5) 10th grade English.

At the technical or vocational level they were:

(1) Commercial Art, (2) Aviation Engines, (3) Mechanical Drawing, (4) Automotive Power Plants, (5) Personnel Management.

This study included all enrollees -- Navy, Army, Marine Corps, and Coast Guard personnel.

The same courses seem to be popular in both the USAFI study and this investigation with the exception that Personnel Management does not appear frequently enough to be included among the more popular courses discovered here.

Let us look at these course areas as they relate to percentage of completions as reported in the sampling returns. (See appendix, page 9, table 1b). It will be seen that the over-all mean percentage of completions is about 46.20%. The median is 24.82%, if one counts those who signed up for a course, whether they handed in any lessons or not, or 40.62% if they signed up for a course and handed in at least one lesson.

In my estimation the final percentage of completion for these respondents will be somewhat higher since these

data represent only those who have taken out a course between the dates 1 May, 1947, and 30 April, 1948. A study made by USAFI on 15 October, 1947 reports:

64.5% of the high school correspondence course completions are achieved in 8 months or less; 33.2% require 9 to 20 months inclusive; and only 2.8% require more than 20 months to complete these courses. 58.3% of the technical correspondence course completions are achieved in 9 months or less; 35.6% require 10 to 20 months inclusive, and only 5.6% require more than 20 months to complete these courses. 44.7% of the college correspondence course completions are achieved in 9 months or less; 50.6% require 10 to 20 months inclusive, and only 4.7% require more than 20 months to complete these courses.'

Type of Rate Held or In Training For

Enlisted enrollees are far more numerous than officer enrollees, being about 15 to 1. The proportion of enlisted men to officers in the Navy is about 9 to 1. This is not startling; first, because courses in which officers may be interested are not as numerous as those for enlisted personnel; second, officers probably have responsibilities of such nature in connection with their duties that very little time can be devoted to taking these courses. To me it is not only interesting but encouraging that such a large percentage of the enrollees of this sample are officers. The sample includes every grade from Warrant to Captain inclusive, and every rating category in the service. (See appendix, table 2, page 10).

'Summary of findings in three separate Completion-Time studies of 1,000 cases each (15 Oct 1947).

The questionnaires returned by those who responded are compiled in table 2a according to rank and rate. For ease in handling, all officer replies were placed in one category. The enlisted ratings were categorized according to main rating groups, such as deck, ordnance, electronic, precision equipment, administrative and clerical, miscellaneous (medical and stewards), engineering and hull, construction, aviation and apprentices. This last category includes those apprentices who did not indicate for which rate they were in training.

A comparison of the questionnaires returned by the various rates shown in table 2a, with their approximate size in the Navy indicates that the Electronics Technician Mates returned a proportionately larger number of returns than any other rate; about three times as many as either the Quartermasters, Fire Controlmen or Yeomen, who were next with about equal proportions. The Seamen returned the least proportionate number of questionnaires.

The Electronics Technician Mates who answered the questionnaire were predominately interested in mathematics (5 at the high school level and 12 at the college level), while 5 were taking a college English course and 3 were taking a course in General Psychology. The ratings held by these men were: 1 Chief, 2 First Class, 16 Second Class, 17 Third Class and 2 Strikers. 23% of them had completed their courses.

The Seamen who answered the questionnaire are primarily interested in high school level courses for credit, second for greater proficiency in the Navy, and next for college credit. They are more interested in English and mathematics at the high school level. Only five of those who answered were taking technical courses. Ten of them have completed their courses. Only 23 of the 72 answered that they were high school graduates or had completed 12 grades of school.

Among the medical group enrollees were Chiefs and Third Class predominately. Twenty-seven of the forty-five respondents had completed the 12th grade. They were equally interested in high school level Business, English and Social Study courses. They were interested most in gaining high school credit, next in greater proficiency in the Navy, and third in college credit.

In the quartermaster rate the Third Class Quartermasters responded most frequently, with the Chiefs and Second Class close seconds. Six of the Quartermasters were high school graduates and only two had completed their course^s. Their chief interests were high school English and science. Seven of them wanted high school credit and only one of each was interested in college credit or was taking a course for greater proficiency in the Navy.

Of the 15 Lieutenants (jg) who answered, 12 are

high school graduates, 3 have completed at least one course, 1 desires high school credit, 1 is working for college credit, and 19 are studying to become more proficient in the Navy. They are most interested in college mathematics and next in technical subjects, such as Diesel Engine Maintenance and Repair, Navigation and Radio.

Ship or Station to Which Attached

To what type of ships or stations are these correspondence course enrollees attached? Table 3 in the appendix, page 12 shows the relationship between type of ship or station and level of course, whether high school, college or technical.

More of the respondents are attached to shore stations, with 164 attached to shore stations that are not aviation activities. It is interesting to note that ships with complements less than 300 compare favorably with those having larger complements. This may arise from the possibility that there are many more units with small crews and so a percentage of returns compared to the number who might be expected to answer may yield a quite different impression. The air craft squadrons were considered separately because they sometimes operate from ships and sometimes from aviation shore stations. Disregarding the air squadrons the percentage of enrollees on board ship (44.4%) and the percentage ashore (55.6%) compares favorably with the percentage of all naval personnel afloat

and ashore, 46% and 54% respectively. It seems reasonable to suppose that men who take correspondence courses are just as likely to be at sea or on shore duty.

School Grade Completed

What school grades have these respondents completed? Table 4 (see appendix, page 13) shows this relationship for high school, college, and technical areas, together with a comparison of the questionnaire return and the original sample.

From table 4 we see that the largest number of enrollees in the sample were interested in high school courses and had from 9-11 years secondary school experience. They were taking English and social study courses, and to a lesser extent mathematics.

The table further reveals that a number of the enrollees in the 9-11 year bracket were engaged in college level courses. This may be accounted for in part by the fact that some schools operate on an eleven year schedule for high school graduation, and so, even though the completion of eleven years of school was checked on the questionnaire, these men were really high school graduates.

The enrollee who had completed twelve years of school turned his attention more frequently to technical subjects and to high school mathematics. He frequently stated that he was interested in refresher work, either to gain greater proficiency in the Navy or in preparation

for return to school.

A study of high school courses selected by school grade completed indicated that enrollees in the 9-11 year group selected more courses than all the high school groups in the other categories combined (140 to 98). In looking at the disenrolled students who had taken high school courses 47 were found to be in the 9-11 year group, compared to 47 for all other groups.

In the college level area those who completed the twelfth grade took more courses than all the other groups -- 85 compared to 60. They completed 24 courses, while those in the other grade classifications collectively completed 16. They disenrolled from 18 courses while the others combined disenrolled from 13. The enrollees were more interested in college level English and mathematics.

In the vocational course area those who had completed the 12th grade were taking nearly half the courses; they completed over half the courses completed, and disenrolled from slightly less than half the courses which enrollees dropped.

Table 4a (see appendix, page 14) is based on the questionnaires returned by the respondents. It appears that those taking high school courses have completed fewer grades (mean=11.24), and those taking college level courses have completed slightly more grades (mean=12.97) than those taking technical courses (mean=11.71). The mean for all

the respondents is 11.74. The median gives the same ranking as the mean.

Length of Time Since Enrollee Left School

Table 5 (see appendix, page 15) indicates that those respondents who had been out of school the shorter time were working on college level courses (median=2.74), while those who had been disassociated with formal schooling longest were engaged in technical courses (median=4.12). Those in between were engaged in high school level courses (median=3.38).

Age of the Enrollee

The age of the enrollee to whom questionnaires were sent ranged from 17 to 54. Table 6 (see appendix, page 16) shows the distribution of ages, the standard deviation, and the standard error of the mean. It appears that the average enrollee is comparatively young, about 23.5 years of age. The mean of the sample is 23.22, the mode 19.5, the median 21.31. This is somewhat greater than the average age of first enlistment of naval personnel, and somewhat less than the average age of re-enlistment personnel in the Navy.

Table 6a (see appendix, page 17) represents the age of the respondents and level of courses they enrolled in. From 17 to 24 years of age they were interested in high school level courses, taking more courses than the technical and college level enrollees combined. Those over

24 were somewhat more interested in technical courses, taking 53, as compared with 50 taking high school level courses.

Length of Time in Service

Table 6b (see appendix, page 18), showing the length of time in the service and the degree of progress made by the enrollees in their correspondence courses indicates that they have been in the service at least four and a half years and that those who have been in the service about five years can be expected to complete more courses. The mode of these categories all fall in the 2 to 3 year bracket. This may be caused by several factors (1) the enrollee has become more adjusted to life in the Navy, (2) he may feel a greater need for education either for school credit which would aid him in securing a position outside the Navy, or for greater proficiency in his present rate in the Navy, (3) he may have more spare time since he probably has a better grasp of the various aspects of his rate by this time.

Active Time in Course for Completed and Disenrolled Personnel

Table 6c (see appendix, page 19) shows the active time in the courses taken by those who have completed and those who have been disenrolled. The mean number of months for those who complete a course is 4.997, while the mean number of months before disenrollment is 6.309 months.

Since these figures represent only those Navy en-

rollees who took out a course between 1 May, 1947 and 30 April, 1948, and since the disenrollment procedure together with the completion criteria (see Definitions, page 16) extend beyond these limits, the above tabulation is not truly representative of Navy enrollees. However, the tabulation does have interest in that it reports on the more energetic enrollees and at the same time on those who disenrolled for one reason or another. It seems to me that the cases tabulated in Table 6c are indicative of the degree of motivation of the enrollee on the one hand, or the lack of proper counseling, or the upsetting influence of changes in duty on the other hand.

Future Plans of Enrollees

In the high school and college course areas nearly twice as many enrollees planned to return to school as compared to those who desired to make the Navy their career. In the technical course area more than twice as many enrollees planned to make the Navy their career as compared to those who desire to return to school.

Table 7 (see appendix, page 20) shows the tabulation of the replies concerning their future plans.

Summary

To sum up the characteristics of the enrollees: It appears that the average enrollee chose high school courses 7 times out of 10, college courses 2 times in 10, and technical courses once in 10 times. Those in the high

school level area preferred English or mathematics. At the college level the most frequently chosen course was mathematics. Those who inclined toward technical courses took more interest in automotive subjects. This investigation agrees closely with a previous study made by USAFI and may indicate not only that the Navy enrollee is essentially interested in the same courses as his contemporaries in the other services, but that the educational problems confronting the present sailorman are not materially different from those associated with his predecessors.

The percentage of completion of courses is 46.2% for this sample and since many have not had adequate time as yet to complete or be disenrolled from the course it is believed that this percentage should increase considerably.

The enlisted enrollees outnumber the officer enrollees in the ratio of 14.7 to 1. Of the enlisted enrollees the Electronics Technician Mates returned the largest proportion of responses, the Fire Controlmen, Quartermasters and Yeomen returned the next largest proportion of responses collectively.

Enrollees were as likely to be found afloat as ashore. The size of the ship seemed to have no significance as far as the number of enrollees therein was concerned.

Most enrollees have completed from 9-11 years of school. They are interested in high school English and

social study courses, and to a lesser extent mathematics. Those enrollees who have completed 12 grades of school preferred technical courses. The enrollees taking college level courses chose English and mathematics more often.

The enrollees taking college courses have been away from formal school training for the shortest period of time. Those taking technical courses have been out of school longer than those engaged in high school level courses.

The average enrollee is about 23.5 years old. The younger enrollees were interested in high school level courses; those over 24 years of age were more interested in taking technical level courses. The average enrollee has been in the service about 4.5 years. He can be expected twice as often to desire to return to school as to make the Navy a career. The older enrollees taking technical courses, however, are more interested in making the Navy their career than in returning to school.

Gilbert P. G. 1945-56

INSTRUCTION AND ADMINISTRATION

In this section the investigation will concern itself with the instructional and administrative aspects of the USAFI program as viewed from the point of view of the enrollee. What difficulties do they encounter in connection with their lessons? Who helps the enrollee when he requires aid? Who helped the enrollee choose the course he took?

General Educational Development Tests

General Educational Development Tests have provided a means whereby many service men have been able to demonstrate their competence, educationally speaking, and thus in most states qualify for a high school diploma, or an equivalency certificate. In some states the laws require certain school credits in history and other subjects in addition to the basic courses. It is suspected that many men who take GED Tests also register for courses with USAFI to satisfy the requirements of their states for a high school diploma either from their local high school or their State Board of Education.

Table 8 (see appendix, page 21) shows the numbers of respondents by level of course who have taken either the high school or college level GED Test, as well as those

who have not. Enrollees who are engaged in high school courses have taken more high school level GED Tests than any other category. Those engaged in technical courses have taken the next largest number. Some who have taken the college level GED test are engaged in high school subjects; twice as many are taking college subjects, however. About 61% of the respondents have not taken the GED Test and 39% have. Of those taking high school level courses 55.5% have not taken the GED Test, while 44.5% have taken it. In the technical study area 75.6% have not taken tests and 24.4% have taken them. These percentages indicate that the taking of the GED Tests probably does not lead to the taking of USAFI courses.

Number of Lessons Completed

Since this sample includes all persons who have taken USAFI correspondence courses between the dates 1 May, 1947 and 30 April, 1948, the number of lessons completed is believed much lower than can ultimately be expected from this group, since some of them may take more than two years to complete the course.

Table 9 (see appendix, page 22) shows the tabulation of the returned questionnaires in connection with the number of lessons completed and kind of course selected. Since the class limits are variable the median has been used in this table. The median number of lessons completed by all respondents was 4.433. Those studying tech-

nical courses completed the lowest number (3.371), while those in the collage area were highest with 4.188. Those engaged in high school level courses completed 3.916. Nearly half the respondents were working on their first three lessons. This may not be too bad as many of them have had their lessons a relatively short time. The number of lessons in the courses range from 5 to 40, over half of the courses have lessons from 12 to 16 in number.

Why Some Enrollees Take Longer than the Average
Three Weeks to Complete a Lesson

According to a USAFI survey it appears that the average enrollee mails a completed lesson every three weeks. Are there good reasons why some of them require longer than this average time?

This question does not apply to 166 of the 571 respondents who mailed their completed lessons in three weeks or less. Of the remainder, most of them excused themselves on the ground that they were unable to complete the lessons in the average time because of duty assignments. About 10% said they took more time because of leave or transfers to new duty stations. About 3% indicated that their home problems interfered with their ability to get their completed lessons in within the average time. Those who indicated that other things interfered with completions totaled about 36%. Their reasons included such things as: they lost their text books, the

course was too difficult, the course was entirely too easy, they were not studying for credit and so had not completed any lessons.

Table 10 (see appendix, page 23) shows the tabulation with respect to this question.

Enrollees Reactions to Instructors' Comments

Does the enrollee feel that the comments of the instructor are of benefit to him?

In reply to this question a large majority (77%) regarded the instructor's comments as very helpful, 13% indicated that his comments were of little value, and 1% said that they were of no help, 9% answered that the instructor made no comments. In connection with this latter group some wrote that it would be helpful if the instructor did make comments because they would feel that he was more human. They felt that the instructor had no interest in them or their progress since he made no comments. Another statement made frequently enough to take into consideration was that several instructors corrected their lessons and the enrollees believed that having only one instructor throughout the course would be much more satisfactory. There seemed to be a feeling on the part of some of the enrollees that they wanted to establish closer contacts with their instructors.

Table 11 (see appendix, page 24) shows the relationship of the answers to this question.

Number of Lessons and Length of Assignments
Considered Desirable by the Enrollees

Arthur J. Klein, in an article on Correspondence Study in Universities and Colleges, published in the Bureau of Education Bulletin, No 10 1920, page 13 wrote:

Comparatively short courses broken into a large number of brief lessons induces students to complete the work and register for new courses . . . University extension divisions have found that the safest general rule in preparing correspondence courses is to make the courses as short as is consistent with unity and the lessons not so long that the average student needs more than an hour or an hour and a half to master each lesson.

Nearly half the Navy enrollees feel that a course of 120 clock hours would be more desirable when broken up into 20 assignments of six hours each. The next most frequent reply indicated that 12 lessons of 10 hours each would be the best. The opinions among those engaged in high school, college or technical area courses agreed fairly closely. Relatively few in any course area desired more than 20 lessons.

Currently the number of lessons contained in the various courses range from 5 in technical courses to 40 in a college level mathematics course. More than half the courses offered contain between 12 and 16 lessons inclusive. With this in mind these respondents may have been indicating collectively that they desire shorter lessons and more of them. A few replies showed that the particular individuals concerned would desire a lesson assignment that could be studied at one sitting and answered at

another. They were somewhat dissatisfied when their lesson assignments took too many days to answer. (See appendix, table 12, page 25).

Help Needed by Enrollees and Source of Help

Does the enrollee require much help and if he does where does he get this help?

About 50% of the enrollees indicated that they needed help on some of their lessons. 41% reported that they needed no assistance at all. 3% felt that they needed help on every lesson and 7% thought they needed help on most of the lessons. Nearly 70% of those engaged in high school courses needed help. Only 47% of those taking college courses needed help on some of the lessons, and 43% of those taking technical courses needed assistance. Probably the need for help by so much larger a percentage of the high school course enrollees stems from their intellectual immaturity, although some may be attributed to poor course selection. (See tables 13 and 13a in appendix, page 26-27) for a tabulation of replies in this connection.

When the enrollee needs aid he most frequently finds no one to help him, when he does seek help he turns first to a shipmate, next, he attempts to seek a way out of his difficulties by consulting other books, and 3% of the time he takes his difficulty to the Educational Services Officer. He frequently turns to his wife, and sometimes to his relatives for assistance. Less frequently he

appeals to his division officer for aid in solving his problem. Least of all does he seek help from his instructor. This seems rather odd since a large percent of the respondents were of the opinion that the instructors' comments were very helpful. Perhaps many have the feeling expressed by the enrollee who inquired if it would be proper to ask his instructor to assist him in solving the more difficult problems.

If these respondents are representative of the feelings of the population it appears that an energetic campaign should be engaged in by those responsible for the administration of USAFI correspondence courses, directed at the instructor as well as the enrollee, setting forth the position of the instructor and his responsibility to the students. It is believed that every effort should be made to encourage the enrollee to seek aid from responsible sources, such as his instructor, the division officers and the Educational Services Officers. It is probable that an elimination of this feeling that the administrators are disinterested will not only improve completion rates but at the same time make USAFI courses more popular and more widely used. It is felt that the initiative in planning and executing a campaign of orientation rests squarely on the shoulders of the administrators of the program, and more, they must carry their campaign to the enrollee. He probably will not seek far beyond his

own resources or at best beyond those of his shipmates before his discouragement provides USAFI with another disenrollee.

Who Helped the Enrollee Choose
the Course he Selected

Those who answered this question checked that no one helped them select their courses slightly more than twice as often as those who had some help. Nineteen percent said the Educational Services Officer helped them choose their courses; 16% indicated that a high school official helped, (in most cases this was the principal, but occasionally a teacher assisted in the selection). About 2% checked that a college official helped. Another 2% found a shipmate to help them choose the course and 1% said their Division Officer aided them in selecting their courses. (A shipmate is taken to mean another enlisted sailorman like themselves; he may have a more senior rate or may be of their own or comparable rate.)

In the high school course area enrollees chose their own courses most frequently but it is heartening to see that the ~~second~~ largest percentage were assisted by high school officials, and third, the Educational Services Officers. Twenty-one percent of those taking high school level courses sought help from the Educational Services Officer in selecting their courses, while fifteen percent in the college level and eleven percent taking technical courses sought out the Educational Services

Officer for assistance. (See table 14, appendix, page 28).

How Did the Enrollee Learn About USAFI

These enrollees heard about USAFI most often from their Educational Services Officers, second from their shipmates and third from the Bulletin Boards. In this question many respondents checked several possible answers. In coding, only the first answer was used so that these data tabulated in table 15 (see appendix, page 29) are not too meaningful. Some have heard of USAFI from friends outside the Navy, their parents, school officials, Navy recruiting personnel, and discharged Navy personnel. It appears that the Educational Services Officer gets the program before the enrollee more often than any one else.

Why Did the Enrollee Feel that USAFI Would Have Any Value for Him

The respondents in this sample indicate that USAFI's chief value lies in the fact that they can gain a high school diploma through the Institute. Many of them thought it would be valuable to them because they could see that it was valuable to their shipmates. An equal number were of the opinion that it was the best means available to them in satisfying a desire to improve themselves. Some thought it would be valuable to them because a school official recommended it to them. (See table 16, appendix, page 30).

Summary

The thoughts developed in this section indicate

that the GED test probably does not influence the enrollee to take USAFI correspondence courses. He completes about 3 lessons during the first year (this includes all who sign up for the year). The most serious difficulty he encounters in getting his lessons in within the average of 3 weeks, aside from intellectual difficulties, is interference caused by duty assignments. The enrollee feels that his instructors' comments are very helpful but he doesn't seek him out when he needs aid; he more often tries to solve his own problems or seeks help from a shipmate. He inclines toward more lessons and shorter lessons. The enrollee chooses his own course more often than he seeks advice from the Educational Services Officer. He learned about USAFI from the Educational Services Officer and feels that USAFI can help him get a high school diploma.

That the enrollee seeks to solve his own problems is commendable but it is felt that much more strenuous effort should be made by the administrators of the program to help the enrollee and to sustain his enthusiasm for completing the course. It is believed that if the Educational Services Officer would show more interest in the progress of his enrollees, offering help to the reticent as well as giving it to those who seek aid, the program and the enrollee would benefit materially.

ENROLLEES' OPINIONS AND SATISFACTIONS

Here we are concerned with the pre-enrollment expectations of the respondents in regard to correspondence course study with USAFI. Why do Navy personnel enroll? What values do enrollees feel that they gain? Does the program meet the enrollees' expectations?

Reasons for Enrolling

More of these respondents (195) enrolled to gain high school credit. One hundred and fourteen enrolled in courses to prepare them for return to civilian life, 91 were interested in self-improvement, and 75 were seeking knowledge in order to be more proficient in the Navy.

In the high school course area more than one half of the enrollees were taking courses for credit. Greater proficiency in the Navy ranked after desire to prepare for return to civilian life and self-improvement. Those taking college courses were seeking credit first. Greater proficiency in the Navy and preparation for return to civilian life in equal proportion ranked second. Those in the technical course area were interested first in preparation for civilian life and second in greater proficiency in the Navy. Self-improvement was checked almost as often as proficiency in the Navy. Table 17 (appendix,

page 31) shows the tabulation of these data.

What is the Enrollee's Estimate
of the Value of the Course

Nearly 67% of the respondents checked that their courses were very valuable to them. Twenty-seven percent felt that their courses were of some value, 4% indicated that they were less valuable than they had expected, and about 2% felt that their courses were of no value. A larger percentage of college and technical course enrollees felt that their courses were of value than did high school course enrollees. It is possible that the college and technical enrollees had a better idea of what they wanted to study than the high school course enrollees and thus made better course selections.

The enrollee was given an opportunity to explain why he evaluated the course as he did. Ninety-two said it was valuable because of the school credit he wanted, 23 thought it was valuable to them as a review in preparation for return to school. Seventeen said it was valuable because it helped them in their job and a like number felt that it increased their understanding. (See tables 18 and 18a in the appendix, page 32-33).

Does the Enrollee Desire to Take Other Courses

About 70% of the high school course enrollees indicated that they wanted to take more courses. Among the college level enrollees this percentage rose to 90%, and 70% of those engaged in technical courses wanted to take

other courses. Fifteen percent didn't know whether they wanted more courses or not. These large percentages who desire more courses may be indicative of the high value enrollees set on education as a means of getting ahead. Of the 15, who do not desire any more courses some wrote that they had completed their high school requirements and having achieved their goal were not interested in continuing; others were of the opinion that these courses were too difficult or they lost interest and so didn't want any more courses. (See table 19, appendix, page 34).

Does the Enrollee Know Others
Who are Taking Courses

This question was included because during the interviews conducted at Great Lakes, Illinois, the investigator felt that few enrollees knew of others who were taking courses and at the same time that there possibly was a feeling that they would like to know other enrollees and be more closely associated with them.

With this notion in mind the tabulation in table 20 (appendix, page 35) is the more interesting in that 4 times out of 5 the enrollee knew of others who were taking courses. One in five knew more than five other enrollees who were engaged in taking a course. Only about 14 in 100 didn't know anyone taking a course. Possibly since the enrollees seem to know each other so frequently these contacts have considerable effect not only in getting new enrollees interested but in mutual encouragement in working

on their courses. Several of the interviewees said that they studied with their friends who were also taking a course often identical with their own. It seems that more cognizance should be taken of these contacts and ways devised for utilizing them more effectively as a means of advertising courses and also to aid in maintaining the enrollee's interest in continuing to carry on his correspondence work.

Has the Enrollee Influenced Anyone
to Take a Course

The data presented in table 21 (appendix, page 36) indicates that 62% felt they had influenced others to take courses, either by talking to them about it or by working on their own courses. Less than 10% felt they had influenced no one and about 28% didn't know whether they had or not. It would appear that an enrollee's enthusiasm for his own course is an infectious thing which spreads out among those with whom he comes in contact. It is probable that if the enrollees could get more help when they are "stuck", their sense of achievement would be greater; this in turn would heighten their enthusiasm, and finally increase their desire to influence others to take courses.

Did the USAFI Program Meet
the Enrollee's Expectations

This question was unfortunately linked to two other questions -- had the enrollee heard about USAFI before he enlisted and did his knowledge of the educational

opportunities made available through USAFI have any influence on his enlistment. Twenty-six percent heard about USAFI before enlisting in the Navy, 67% had not heard about USAFI and 7% didn't remember. Five percent said their knowledge of USAFI influenced them to enlist, 7% felt that it had influenced them to some extent and 88% checked that it had not influenced them in deciding to enlist.

The question of whether USAFI met the enrollees' expectations was variously interpreted by the respondents and so the tables 22, 22a and 22b (appendix, pages 37/6 39) have very little meaning except as a general indication that many of them felt that they were getting what they were looking for through USAFI.

Does Attendance at Service Schools Relate
to Taking Correspondence Courses

More than 75% of the respondents had attended some service school while in the service and 25% had not. This is a considerably higher ratio than exists at any one time between the enlisted personnel under training and those in the naval establishment. Therefore, it seems that there is an indication that a USAFI correspondence course enrollee may be expected more often to have attended a service school. (See appendix, table 23, page 40).

What Factors Tend to Lessen
the Interest of an Enrollee

In answer to this question 28% of the enrollees checked none. A fairly large number (52) complained about

the text book they used, saying it was not easily understandable, there weren't enough examples or sketches, and similar statements. Forty-nine said that lack of time to prepare lessons made them lose interest in their course, 38 felt that the lack of help reduced their interest in the course, 36 complained about the slowness of the mail service, saying that waiting for corrected lessons to be returned made them lose interest. Twenty-three admitted that competing outside interests made correspondence study less attractive to them. Twenty complained of long lessons.

Among those replies which did not fit conveniently into any category were complaints such as: the enrollee lost his course, there was too much red tape, he had been transferred to new duty and his interests changed, the course was too elementary, or it wasn't what he wanted. None of the factors were supported by enough enrollees to indicate that any really serious problems existed for them. (See table 24, appendix, page 41).

Classification of Remarks
Made by Enrollees

Three hundred and eighty-two enrollees were interested in expressing their views concerning USAFI correspondence courses. Their remarks were categorized in table 25 (appendix, page 42).

Seventeen percent emphasized the excellence of the program. Another 46% felt the program was good and

made suggestions for its improvement. Some 14 were satisfied, 2 were dissatisfied and the comments of 21 were not easily categorized.

Those engaged in high school courses were frequently felt the program was excellent or made suggestions for improvement. The percentage of dissatisfied customers at this level was greater than those engaged in college or technical courses.

The following comments are representative of those made by the respondents who consider USAFI correspondence courses excellent:

The USAFI program and management so impressed me that I would have stayed in the Navy for good if the rest of the Navy was anywhere near as good as the program.

My course is highly recommended by sheet metal men that have been at this trade for years in civilian occupations.

The idea of doing away with it should never be entertained.

I'm grasping things now that I never could learn in school.

I am impressed with the entire USAFI set up. It is invaluable to service personnel. Loss of its facilities would be a great one indeed.

Have completed 13 courses and shall continue as long as possible.

I am planning to ship over until I finish my high school studies with USAFI.

I sincerely believe that USAFI should be a permanent establishment in the Armed Services. I note that I have had the same instructor throughout, enabling him to accurately judge the work.

Learned more grammar than I did in 12 years of school.

In studying for the examination for NAPS (Naval Academy Prep School) I used USAFI books exclusively, and used USAFI books before taking the Naval Academy examinations. I passed both and now am a midshipman.

It gives us fellows in the Navy an even chance.

I am a Division Officer and find more and more of my men enrolling in these courses.

Keep USAFI so that men will have a chance to better themselves.

Only a few of the comments representative of those who consider correspondence courses good and have made suggestions will be quoted. Relevant excerpts from the remarks have been incorporated in separate paragraphs below:

USAFI is a great outfit, it should be advertised more widely; engage in a stronger selling campaign; publicize it more among civilians, especially workers, as a recruiting inducement; I don't think enough sailors are aware that it exists. GET THE WORD OUT TO ALL HANDS.

It helped me review a course; suggest review courses be designed and distributed; good review material for Naval Academy Prep Courses on board ship.

I think a place should be set aside on each base and on each large ship for people to study, it should be quiet, no radios allowed; a study period assigned each day on duty time is very desirable.

Encourage men to write to USAFI directly; USAFI should notify student of his final test mark expressed as a percentage. Issue better quality completion certificates even if at students expense. Provide more room on test papers for answers. Make tests cover the lesson material. It takes over a month to receive a course when it is sent for. Can't we have some up to date courses in Marine Engineering and

automatic combustion control, also a mathematics major, history major and English major. Is it permissible to write to the instructor for aid? I couldn't take my course from the ship when I was transferred, think we should be able to keep our materials. I've waited two months for an end-of-course test. A test half way through the course would be helpful as would sample examination questions. Texts should contain more illustrations and pictures. Suggest a course on how to study -- based on correspondence course enrollees experience. Allow more time to complete course; if man submits lessons regularly, extend time limit beyond the 18 months allowed.

Excerpts from remarks made by those respondents who were dissatisfied are quoted at greater length in the succeeding paragraphs:

The Educational Services Officers are not well acquainted with their jobs and the men under their supervision are not very helpful or interested in their work. The Navy should have a rate for men working in Educational Services. I believe the weakest part of the program lies in the negligence of the Educational Services officers. If the Educational Services officers would keep track of the enrollee's progress he could help him when he needed help. The attitude of the Educational Services officers on several small ships which I have observed certainly discourages the men. I believe the job is important enough to the individual and to the Navy as career men develop to demand a full time Educational Services officer on large ships and shore stations at least, backed up by an enthusiastic and interested staff of enlisted men. Better judgment should be exercised in selecting Educational Services officers who know a lot more about personal guidance than many of them do now.

Enter accomplishment in the service record of the men concerned. We need instruction in how to start taking a course. Some of the problems in Algebra were not fully explained. I believe more help should be given than just marking problems right or wrong. Many times a problem will come back marked wrong with no suggestions whatsoever. Think instructor should insert the correct solution when the problem is wrong. There should be help provided by the officers when a man gets stuck. One instruc-

tor includes a whole page of criticism and it's very helpful to me -- it should be standard practice. Comments in lessons are too brief to be of much value. Different instructors correct my lessons -- sometimes it's confusing. More frank criticism on the quality of the student's work. I made 97 out of a possible 105 and I received only satisfactory as though I had just barely passed.

Those who feel that the USAFI program is excellent reveal a certain intellectual maturity and focus attention on the fact that they are highly motivated, with definite programs laid out before them. They seem to be very eager to acquaint others with the value of the program and insist or imply in their remarks that the program must be kept available for others as well as themselves.

Those who rate the program "good" make some very pertinent suggestions concerning the improvement of the program. They feel that USAFI should be advertised more strenuously and be more energetically brought to the attention of Navy personnel. They suggest quiet study areas, permission to study on duty time, better administrative procedures, and more inclusive curriculum offerings.

The less satisfied enrollees made many remarks indicating their lack of approval of the performances of their Educational Services officers and their helpers, and recommended better selection and provision of full time Educational Services officers as well as an educational services rating for enlisted men. Some indicated that the instructional services are not quite all that they should

be, a few made recommendations that additional help be provided, classes be organized and work be criticized more frankly.

SUMMARY

This study is intended to be an investigation of random samplings of Navy personnel who enrolled for a USAFI correspondence course between 1 May, 1947 and 30 April, 1948, to discover if there are certain general characteristics of those enrollees, to record their reactions to the instructional and administrative aspects of the program, and to report their estimate of the value of their courses to them and the satisfactions they derived.

Characteristics of the Enrollees

There were 67.7% of the respondents enrolled in high school courses. Of these high school enrollees 20.6% took English courses, and 18.2% chose mathematics. Of the 14.1% who were enrolled in college courses, 5.3% selected mathematics. The other 18.2% of the sample were studying technical courses.

The most frequently selected single course was American History for the high school course enrollee, Photography for the technical course enrollee, and College Algebra for the college enrollee.

The mean percentage of completions is 46.20% of the lessons; the median of the percentage of completions is 40.62%. This is considered somewhat low since the en-

rollees collectively have not yet had time to complete the courses.

Enlisted enrollees outnumbered officer enrollees considerably. More enrollees want high school credit, about half as many are studying to become more proficient in the Navy; a larger percentage of the officers are studying for the latter reason.

The Electronics Technician Rates returned more completed questionnaires in proportion to the size of their rate than any of the others.

The enrollee is just as likely to be afloat as ashore. Most of the enrollees have been in the Navy about 4.5 years and three out of four of them have attended service schools.

The average enrollee has been out of school about 4.12 years and has completed about 11.74 years of formal schooling. His age ranges from 17 to 54 with a mean of 23.22 years. The man who is 17 to 24 years old is more interested in taking high school courses; if he is over 24 he is more interested in technical courses. He can be expected to complete his correspondence course in about 5 months or become disenrolled in about 6.3 months. In view of USAFI's completion policy these figures are considered somewhat low.

Twice as many of the enrollees who are taking high school or college courses expect to return to school

as do those who desire to make the Navy their career; twice as many who are enrolled in technical courses plan to stay in the Navy as expect to return to school.

Instruction and Administration

Thirty-nine percent of the enrollees took GED tests. This seems to indicate that the taking of GED tests does not lead to the taking of correspondence courses.

The enrollee completes about 4.4 lessons during the year. He inclines toward more lessons and fewer hours per lesson. He usually desires to take another course on the completion of the one he is currently engaged in. It would seem that if lessons could be so designed and administered as to make it possible for the enrollee to succeed on each one in a short period of time, these minor successes can become habitual and lead ultimately to the successful completion of his present course and challenge him to take another. One enrollee wrote on his questionnaire, "It's more satisfying to pick berries in a smaller can, because it's not so hard to fill up a small one."

Thirty-two percent of the enrollees indicated that their duty assignments impeded the rapid completion of their lessons. Without a clearer understanding of individual situations, this reported interference may mean almost anything from a lame excuse to a real obstacle.

In spite of the fact that 77 of the enrollees

felt that their instructors' comments were very helpful, and only 1% said that they were of no value at all, very few of the enrollees sought aid from their instructors. Comments reflect several possible reasons for this situation: They are afraid that their grades will suffer if they seek aid from the instructors; they do not know that such aid is available; they don't need help; they can find assistance closer at hand.

The enrollee was almost as reluctant to seek aid from the Educational Services Officer. A study of these data indicates that the enrollees need help; first, in choosing their courses, second, in working out the more difficult solutions, and third, in sustaining their enthusiasm until they have achieved the goal they have set for themselves. The fact that they sought aid more frequently from others than the Educational Services Officer or instructor points to a lack of proper human relationships. These enrollees imply that the Educational Services Officer is better at selling the course to them than in following up to produce a satisfied customer.

Enrollees two to one have no one to help them choose their courses. When someone does help them it may be their Educational Services Officer or some high school official.

Opinions and Satisfaction

Ninety-four percent of the enrollees felt that

their courses were of value to them and 6% were disappointed. USAFI's value to most of them was based on obtaining a high school diploma. They frequently arrived at this evaluation because of their shipmates' achievements.

Seventy percent of the enrollees desired to take other courses on completion of their current course; 90% of the college course enrollees desired to continue studying.

The enrollees know others who are taking courses 4 times in 5, 1 in 5 know more than 5 others who are taking courses, and 62% of them feel that they have influenced others to take a course.

Twenty-six percent of the enrollees had heard about USAFI before enlisting. About 5% said this knowledge influenced them to enlist.

Most enrollees said that nothing tended to make them lose interest. Those who did lose interest blamed the text books first, and next lack of time or lack of help needed to prepare their lessons.

Of those enrollees who made remarks about the program 17% said it was excellent, 46% said it was good or made suggestions for its improvement; only two percent were dissatisfied. Those who consider the program excellent are eager that their shipmates be made aware of the opportunities and make strong recommendations that the program be maintained. Those who consider the program

'good' suggest quiet study areas, permission to organize classes on duty time, less red tape and more inclusive curriculum offerings. The less satisfied enrollees desire more personalized instruction and administration.

RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER STUDY

Recommendations

The following recommendations do not pretend to be startling or particularly new. As a matter of fact, in most cases they propose to attack the same problems that have always beset the Educational Services program. They are intended to focus attention on the problems which confront the enrollee in the hope that a more searching examination may reveal approaches that are practical from the point of view of expenditure of time, money, and manpower. This investigation is solely concerned with the enrollee. A study of the Educational Services officers' reactions to questions in these same areas is needed for a more complete picture. The recommendations made below should be read with these limitations and bias in mind.

1. In order to improve the conditions for appropriate human relationships it is recommended that:

- a. An Educational Serviceman's rate be established, complements provided for and the billets filled with personnel competent in the performance of the duties specified in their rating description.
- b. Effective selection techniques be utilized to provide educable personnel who are interested in

doing this type of work.

c. Full time Educational Services Officer billets be provided on large ships and shore stations and that these billets be filled with officers interested in the program.

d. Appropriate training and indoctrination facilities be provided to educate Educational Services personnel in proper administrative procedures and to acquaint them with the techniques of adequate counseling and of exercising good human relationships.

2. In order to improve the study environment it is recommended that:

a. Quiet study areas be made available wherever enrollees may be stationed.

b. The provision for instructors be expanded to include the hiring of instructors to assist correspondence course enrollees.

c. Organized groups of correspondence course enrollees be permitted and encouraged to study on duty time wherever such a proposal would not interfere with the efficiency of the unit or command concerned.

3. In order to improve instruction it is recommended that:

a. The reports required of the Educational Services Officers include: 1 evaluation of caliber of lesson service received, 2 number of men enrolled, 3 number of new enrollees - current report, 4 completions,

5 disenrollments, 6 lessons sent, 7 lessons received.

b. The relationships and responsibilities of the enrollee and instructor toward each other be clarified and the conclusions disseminated throughout the service.

c. The demand for technical courses be determined in the light of value to the individual and the Navy, and this demand be satisfied.

4. In order to gain more acceptance in the service it is recommended that the value of the program to the Navy and to the enrollee be widely advertised.

Suggestions for Further Study

A study of the data gleaned from the questionnaire indicates that the program is doing what it is intended to do. However, many enrollees made comments which focused attention on a number of changes or modifications to existing practices which could increase the benefits of the program to the individual and to the Navy as well. Not enough factual data is at hand to warrant actual recommendations based on these comments, but the following suggestions are offered for further study:

1. Determining the most effective means of counseling enrollees should contribute much toward improving the satisfactions achieved by future enrollees.
2. Investigation of the Educational Services Officers' impressions of the program and their concepts concerning

their responsibilities for its administration.

3. Question enrollees six months after enrollment concerning their reactions to the program. A continuing study of the mass of data thus built up may reveal certain satisfactions and dissatisfactions that probably would suggest corrective action.

4. Restudy the criteria for competitions to arrive at a more realistic evaluation of the satisfaction sought by the enrollee and assess his accomplishment in the light of what he intended to do.

5. Compare enrollees who have gained their high school diploma through Educational Services with other sailormen who gained their high school diplomas in residence at secondary schools to determine if there is any reliable difference between them in the performance of their Navy duties.

6. Continuously investigate and study the effect of the instructors' comments on the enrollees' interest and enthusiasm, to discover how best to establish and maintain desirable relationships between them.

7. Investigate the length of lesson assignments and number of lessons which make up a course of study and acquaint the enrollee with the extent of the work involved before he can accomplish his ambition.

8. Make an intensive study of the attitudes of enrollees and Educational Services administrators toward each other

with a view to improving them where they are undesirable
and making them better where they are already good.

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APPENDIX

QUESTIONNAIRE

AND

TABLES

ONE THROUGH TWENTY-FIVE

Gilbert Owen & Co.

25, COTTON FIBRE

1924

UNITED STATES ARMED FORCES INSTITUTE

1.

MADISON 3, WISCONSIN

In Reply
Refer to:

Dear Mr.

Since you are considered one of the representative sailormen taking a United States Armed Forces Institute Correspondence Course, I am addressing the enclosed questionnaire to you to ask you to help in improving the service.

As a special assignment for USAFI and the Navy, I have been asked to analyze the feelings that a number of sailormen, who like yourself are registered for similar courses, have in connection with USAFI.

Your answers to the enclosed questions will supply valuable information upon which to base recommendations for improvements in the USAFI services. We sincerely want to make the course more meaningful and helpful to you, and other men and women who will take these courses in the future. Your answers will be held strictly confidential, and only the tabulated results of all the questions will be revealed.

It will take only a few minutes to complete the questionnaire. Will you please mail your answers in the enclosed envelope today?

Thank you for your cooperation.

Very truly yours,

WILLIAM H. JOHNSEN.

USAFI

CORRESPONDENCE COURSE

QUESTIONNAIRE

1. Rate/Rank
2. To what Ship or Station are you attached?
.....
3. Please check age bracket which includes your age.
 1. Less than 18.
 2. 18 to 20.
 3. 20 to 22.
 4. 22 to 24.
 5. Over 24.
4. Please circle the school grade you completed.
6 7 8 9 10 11 12 13 14 15 16
5. How many years ago did you leave school?
 1. Less than a year.
 2. 1 to 2 years.
 3. 2 to 3 years.
 4. 3 to 4 years.
 5. More than 4 years.
6. Check whether or not you have taken the General Educational Development Test.
 1. High School Level, Yes.
 2. College Level, Yes.
 3. No, neither one.
7. Are you taking your present course for (check one):
 1. Credit for High School.
 2. Credit for College.
 3. Greater proficiency in the Navy.
 4. Preparation for return to civilian life.
 5. Other reason.....
(please state)
8. How many months ago did you sign up for this course? (Circle one.)
1 2 3 4 5 6 7 8 9 10 11 12
9. Lessons have you handed in so far.
(How many)

10. The average length of time for submitting a lesson is about three weeks. If you have taken longer than this, please state why.

.....

11. What is your estimate of the value of the course to you? (Check one.)

1. Very valuable.
 2. Some value.
 3. Less value than I expected.
 4. No value at all.

Please explain your choice briefly.

.....

12. Have you heard about or seen information on USAFI through: (Check one.)

1. Your shipmates.
 2. Your Division Officer.
 3. Your Educational Services Officer.
 4. The Plan of the Day.
 5. The Movies.
 6. The Bulletin Boards.
 7. Other Sources.

13. How did you come to feel that USAFI could have any value for you? Please state briefly.

.....

14. Do you feel that instructor's comments are: (Check one.)

1. Very helpful.
 2. Of little help.
 3. Of no help.
 4. He makes no comments.

15. What factors tend to lessen your interest in the course? Please state briefly.

.....

16. If you could engage in a course that took 120 clock hours to complete, would you prefer that the course be divided into: (Check one.)

1. 6 lessons of 20 hours each.
 2. 10 lessons of 12 hours each.
 3. 12 lessons of 10 hours each.
 4. 20 lessons 6 hours each.
 5. lessons of .. each (please fill in the blanks if none of the above choices seem desirable to you).

17. How much help do you need in the preparation of your lessons?
(Check one.)

1. On every lesson.
2. On most lessons.
3. On some of the lessons.
4. On none of the lessons.

18. Who helps you with your lessons when you get stuck on them? (Check one.)

1. A shipmate.
2. The Division Officer.
3. The Educational Services Officer.
4. No one.
5. Other sources
(Please state.)

19. Who helped you choose your course? (Check one.)

1. A shipmate.
2. The Division Officer.
3. The Educational Services Officer.
4. No one.
5. Other
(Please state.)

20. Has the taking of this course made you want to take other courses after you complete this one?

1. Yes.
2. No.
3. Don't know.

21. How many shipmates that you know of are taking USAFI Correspondence Courses?

1. None.
2. 1 to 5.
3. More than 5.

22. Did you influence anyone else to take a course?

1. No one.
2. Yes, by working on my own course.
3. Yes, by talking to them about it.
4. Don't know that I have influenced anyone.

23. Do you plan to: (Check one.)

1. Make the Navy your career.
2. Return to school when your enlistment expires.
3. Get a job
4. No plans yet. (What Kind.)
5. Other
(Please state.)

24. Did you hear about USAFI before you enlisted in the Navy?
1. Yes.
 2. No.
 3. Don't remember.
25. Did your knowledge about USAFI influence you to enlist in the Navy?
1. Yes.
 2. To some extent.
 3. No.
26. If you heard about USAFI before you enlisted, do you feel that the Educational Services Program is as you expected it to be?
1. Yes, it is about what I expected.
 2. No, it is less than I expected.
 3. It is much better than I expected.
 4. I think it was mis-represented to me.
27. What Navy Service School(s), other than Recruit Training have you attended?
-
- (Please State.)
28. What course are you now taking?
-
29. If you plan to take another course, what will it be?
-
30. If you have any other remarks or suggestions that you would like to include, please write them here.
-
-
-
-
-
-
-
-
-
-

Thank You for Your Help.

Please Mail This Now.

TABLE 1
COURSES SELECTED BY ENROLLEES

Enrollee	Business		English		Mathematics		Social Studies		Sci-ence		Technical		Total	
	HS	C	HS	C	HS	C	HS	C	HS	C	HS	C	HS	C
Active	51	28	191	45	204	49	190	23	53	194	689	145		
Disenrollees	11	6	37	7	25	14	13	4	8	27	94	31		
Completed	46	8	86	8	48	18	51	6	17	57	248	40		
Total	108	42	314	60	277	81	254	33	78	278	1031	216		
Courses Per Area	12	10	13	7	10	5	4	7	5	50	44	29		
Enrollees Per Course	9	4.2	24	8.6	27.7	18.2	63.5	4.7	17.6	5.6	23.4	7.4		
Enrollees Engaged	7.1	2.7	20.6	3.9	18.2	5.3	16.7	2.2	5.1	18.2	67.7	14.1		

• HS means high school level course

C means college level course

TABLE 1a

FIVE COURSES ENGAGED IN MOST FREQUENTLY
BY ENROLLEES IN THE HIGH SCHOOL,
COLLEGE, AND TECHNICAL COURSE AREAS

High School Course Area

Active Enrollees	
Course Title	Number Engaged
1. American History	131
2. Beginning Algebra	63
3. Civics	45
4. Plane Geometry	31
5. Practical English Usage	30

Enrollees Who Have Completed Their Courses	
Course Title	Number Engaged
1. American History	40
2. Tenth Grade English	20
3. Bookkeeping and Accounting	15
4. Basic Mathematics	12
5. Ninth Grade English	9

Disenrolled Personnel	
Course Title	Number Engaged
1. Advanced Algebra	7
2. American History	7
3. Writings of English Authors	7
4. Writings of American Authors	7
5. Beginning Algebra	7

College Course Area

Active Enrollees	
Course Title	Number Engaged
1. English Composition	31
2. College Algebra	29
3. General Psychology	13
4. Business Law	9
5. Differential Calculus	7

Enrollees Who Have Completed Their Courses	
Course Title	Number Engaged
1. College Algebra	12
2. English Composition	6
3. Plane Analytical Geometry	4
4. Modern European History	3
5. Business Law	2

Continued on page 8

TABLE 1a (cont)

Disenrolled Personnel	
Course Title	Number Engaged
1. College Algebra	7
2. English Composition	6
3. Differential Calculus	4
4. Introduction to Accounting	3
5. Business Law	3

Technical Course Area

Active Enrollees	
Course Title	Number Engaged
1. Photography	20
2. Refrigeration	16
3. Principles of Diesel Engines	16
4. Automotive Power Plants	14
5. Commercial Art	5

Enrollees Who Have Completed Their Courses

Course Title	Number Engaged
1. Radio for Beginners	9
2. Automotive Power Plants	5
3. Automotive Chassis & Running Gear	4
4. Automotive Electrical Equipment	4
5. Principles of Diesel Engines	4

Disenrolled Personnel	
Course Title	Number Engaged
1. Photography	5
2. Automotive Power Plants	2
3. Mechanical Drawing	2
4. Radio For Beginners	2
5. Radio Communications	2

TABLE 1b

COURSES NOW ENGAGED IN vs. % OF LESSONS COMPLETED

% of Completion	High School	College	Technical	None	Total
0 - 9.9	83	25	32	36	176
10 - 19.9	38	15	11	2	66
20 - 29.9	18	8	10	2	38
30 - 39.9	20	6	9	0	35
40 - 49.9	12	10	7	1	30
50 - 59.9	17	7	3	1	28
60 - 69.9	12	6	1	0	19
70 - 79.9	10	4	4	1	19
80 - 89.9	7	1	2	0	10
90 - 100.0	35	14	15	36	100
No Reply	4	0	3	43	50
Total	256	96	97	122	571
% of Lessons	53	9	19	32	113
Mean	44.87	44.18	44.95	57.29	46.20
	32.40	32.10	32.80	33.10	33.95
	2.30	3.45	3.81	4.52	1.68
Median	20.14	29.95	23.95	27.45	24.82
Median	56.71	37.45	33.84	---	40.62

*Number of lessons incorporated in the category 0 - 9.9 because these enrollees indicated that they have completed no lessons.

This median includes those who have handed in no lessons.

This median excludes those who have handed in no lessons.

TABLE 2

PERCENT OF ENROLLEES WHO ARE OFFICERS OR ENLISTED MEN

Course Level Selected	Rate/ Rank	Active	Completed	Disen- rolled
High School	Officers	2.1	3.6	1.3
	Enlisted	65.0	68.4	60.5
College	Officers	1.8	1.4	1.3
	Enlisted	17.1	15.1	16.4
Technical	Officers	2.4	1.4	4.7
	Enlisted	11.6	10.1	15.8
Total		100.0	100.0	100.0

TABLE 2a

RATE/RANK OF ENROLLEES ENGAGED IN VARIOUS COURSE AREAS
Most
Frequent

Rating Group	High School	College	Technical	None	Total	Rate	Number
Officers	7	20	9	6	42	Lt(jg)	15
Deck	18	7	5	3	33	QM	17
Ordnance	7	3	1	5	16	FC	8
Electronics	11	19	2	6	38	ETM	38
Precision Equip.	0	0	1	0	1	OM	1
Admin. & Clerical	36	8	14	13	71	YN	26
Misc.-Med.-Stewards	78	17	12	33	130	SN	72
						NM	45
Engineer-Null	18	2	17	10	47	NM	12
Construction	13	1	16	9	39	FN	16
Aviation	57	17	17	25	106	AD	20
Apprentices	9	2	0	5	16	--	--
No Reply	2	0	3	7	12	--	--
Total	256	96	97	122	571	--	--

o

ETM=Electronics Technicians Mate

NM=Machinist Mate

AD=Aviation Machinist Mate

NM=Hospital Corpsman

OM=Optical Repairman

QM=Quartermaster

FC=Firecontrolman

YN=Yecoman

SN=Seaman

FN=Fireman

Lt (jg)=Lieutenant Junior Grade

TABLE 3
COURSE LEVEL AND TYPE OF DUTY ASSIGNMENT

Duty Assignment	High School	College	Technical	None	Total
Ship (over 1000)	25	7	13	18	63
Ship (300-1000)	40	9	17	15	81
Ship (less than 300)	35	11	16	15	73
Aviation Shore Station	45	23	13	27	108
Non-Aviation Shore Station	73	34	26	31	164
Discharged	10	5	3	14	32
Aircraft Squadron	26	7	8	4	45
No Reply	2	0	1	2	5
Total	256	96	97	122	571

*Ship (over 1000), (300-1000), (less than 300) refers to complement of crew normally assigned.

TABLE 4

COURSE SELECTION & SCHOOL GRADE COMPLETED
(from basic sample)

Grade	Status	Busi- ness		English		Mathe- matics		Social Studies		Science Tech- nical		Totals		
		A	C	A	C	A	C	A	C	A	C	A	C	All
1-7	A	0	0	3	0	6	0	2	0	0	5	11	0	16
	C	0	0	1	0	0	0	0	0	0	0	1	0	1
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
8	A	2	0	13	0	11	0	17	0	2	11	50	0	61
	C	2	0	3	0	2	0	2	0	0	3	9	0	12
	D	1	0	4	0	2	0	2	0	0	1	9	0	10
9-11	A	16	2	145	3	81	1	163	2	26	60	431	8	499
	C	13	2	75	0	13	1	43	0	6	10	150	3	163
	D	1	1	27	0	8	0	8	0	3	7	47	1	55
12	A	29	19	16	33	91	22	4	11	22	93	162	85	340
	C	25	4	5	7	29	10	2	3	8	31	69	24	124
	D	6	2	3	6	13	8	1	2	4	13	27	18	58
13	A	0	0	2	4	4	11	0	2	0	3	6	19	28
	C	2	0	0	0	0	3	0	0	0	1	2	3	6
	D	0	1	1	1	1	4	0	0	0	3	2	6	11
14	A	0	1	0	2	0	5	0	3	0	2	0	12	14
	C	0	0	0	0	0	0	0	2	0	2	0	2	4
	D	0	0	0	0	0	2	0	2	0	0	0	4	4
15	A	1	1	0	0	2	0	0	0	0	1	3	1	5
	C	1	1	0	1	0	0	0	0	0	2	1	2	5
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
16	A	2	4	0	0	0	2	0	2	0	5	2	8	15
	C	0	0	0	0	0	0	1	0	0	0	1	0	1
	D	0	2	0	0	0	0	0	0	0	2	0	2	4
Over 17	A	0	1	0	0	0	1	0	0	0	2	0	2	4
	C	0	0	0	0	0	0	0	0	0	1	0	0	1
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
No Reply	A	1	0	7	0	9	7	4	3	3	12	24	10	46
	C	3	1	3	0	4	4	2	1	3	7	15	6	28
	D	3	0	2	0	1	0	2	0	1	1	9	0	10

*A=Active Enrollee, C=Completed Enrollee, D=Disenrolled
Personnel, HS=High School, C=College.

TABLE 4a

SCHOOL GRADE COMPLETED AND COURSE SELECTION
(from Questionnaire)

Grade	High School	College	Technical	None	Total
6-7	2	0	3	2	7
8	12	0	9	7	28
9	38	1	6	10	55
10	57	0	8	17	82
11	58	7	11	18	94
12	69	62	49	51	231
13	3	10	3	5	21
14	1	5	1	4	11
15	3	2	0	2	7
16	3	7	2	2	14
No Report	10	2	5	4	21
Total	256	96	97	122	571
Mean	11.24	12.97	11.71	11.79	11.74
σ	1.46	1.29	1.57	1.36	2.40
\bar{x}	.09	.13	.17	.04	.07
Median	11.19	12.58	12.13	12.05	11.99

TABLE 5

TIME SINCE ENROLLED LEFT SCHOOL & COURSE SELECTED

Years out of School	High School	College	Technical	None	Total
Less than 1 year	6	1	1	6	14
1-2	39	16	10	22	87
2-3	60	26	7	35	128
3-4	53	10	20	15	98
Over 4	98	42	59	42	241
No Reply	0	1	0	2	3
Total	256	96	97	122	571
Median	3.38	2.74	4.12	2.86	3.51

TABLE 6

AGE OF ENROLLEE & COURSE PROGRESS

Age	Active	Completed	Disenrolled	Total
17-18	72	7	3	82
19-20	401	125	63	589
21-22	179	69	44	292
23-24	92	18	11	121
25-26	91	19	11	121
27-28	51	20	9	80
29-30	40	31	1	72
31-32	24	15	2	41
33-34	21	11	2	34
35-36	8	10	1	19
37-38	9	9	1	19
39-40	4	3	0	7
41-42	2	3	1	6
43-44	4	1	0	5
45-46	3	0	0	3
47-48	0	0	0	0
49-50	1	0	0	1
51-52	0	0	0	0
53-54	1	0	0	1
Total	1003	341	149	1493
Mean	23.56	23.83	22.80	23.22
σ	4.96	5.66	3.84	5.34
$\frac{\sigma}{\sqrt{x}}$.156	.306	.314	.138
Median	21.11	21.59	21.14	21.21

TABLE 6a

AGE OF ENROLLEES AND COURSE SELECTION

Age	High School	College	Technical	None	Total
Less than 18	1	0	0	1	2
18-20	97	22	16	44	179
20-22	75	26	23	41	165
22-24	33	10	5	11	59
Over 24	50	37	53	24	164
No Reply	0	1	0	1	2
Total	256	96	97	122	571
Mean	---	---	---	---	20.70
	---	---	---	---	.71
	---	---	---	---	.03

TABLE 6b

LENGTH OF TIME IN SERVICE & COURSE PROGRESS

Years	Active	Completed	Disenrolled
0- 1	183	17	13
2- 3	443	165	94
4- 5	98	42	16
6- 7	155	45	16
8- 9	38	20	3
10-11	21	14	1
12-13	17	7	0
14-15	10	15	1
16-17	6	9	0
18-19	9	4	1
20-21	4	2	1
22-23	2	1	1
24-25	5	0	0
Total	991	341	147
Mean	4.75	5.35	4.50
σ	3.88	4.40	1.43
$\frac{\sigma}{\bar{x}}$.123	.236	.236

TABLE 6c
ACTIVE TIME IN COURSE

Months	Completed	Disenrolled
1	5	2
2	44	2
3	52	5
4	63	9
5	55	25
6	37	45
7	39	28
8	23	20
9	11	12
10	8	1
11	7	3
Total	344	152
Mean	4.997	6.309
\bar{c}	2.280	1.860
\bar{c}_x	.122	.151

TABLE 7

FUTURE PLANS & COURSE SELECTION

Future Plans	High School	College	Technical	None	Total
Navy Career	62	28	42	23	155
Go to School	115	50	16	44	225
Get a Job	28	4	18	31	81
No Plans	28	6	11	8	53
Other	21	7	9	12	48
No Reply	2	1	1	4	8
Total	256	96	97	122	571

TABLE 8

OF ENROLLEES WHO HAVE TAKEN
GENERAL EDUCATIONAL TESTS
AND COURSE SELECTION

GED Tests	High School	College	Technical	None	Total
High School Level	105	14	19	45	183
College Level	5	12	3	11	31
Neither	137	70	68	61	336
No Reply	9	0	7	5	21
Total	256	96	97	122	571

TABLE 9

NUMBER LESSONS COMPLETED AND COURSES SELECTED

Lessons Completed	High School	College	Technical	None	Total
None	52	9	20	23	104
1-3	76	35	36	22	159
4-6	42	21	18	8	89
7-9	22	15	5	7	49
10-12	17	7	3	3	30
13-15	9	0	3	2	14
16-18	5	1	0	4	10
19-24	6	5	2	0	13
25-35	2	1	0	1	4
Over 35	2	1	1	3	7
Completed	19	10	9	35	73
No Reply	4	1	0	14	19
Total	256	96	97	122	571
Median	3.916	4.188	3.370	7.424	4.433

TABLE 10
REASONS FOR TAKING LONGER THAN 3 WEEKS
(AVERAGE) FOR SUBMITTING LESSONS

Reason	High School	College	Technical	None	Total
Duty					
Assignment	72	31	36	17	156
Transfers					
Leaves	20	7	3	2	32
Preparation					
for Rate	8	1	3	0	12
Home					
Troubles	1	1	2	0	4
Does not					
Apply	63	31	22	50	166
Course not					
Good	1	0	0	0	1
Other	66	17	16	20	119
No Reply	25	8	15	33	81
Total	256	96	97	122	571

TABLE 11
ENROLLEES' REACTIONS TO INSTRUCTORS'
COMMENTS

Reactions	High School	College	Technical	Wang	Total
Very Helpful	175	72	68	81	396
Of Little Help	32	10	10	16	68
Of No Help	2	2	0	4	8
He Makes No Comments	19	9	6	9	43
No Reply	28	3	13	12	56
Total	256	96	97	122	571

TABLE 12

NUMBER OF LESSONS AND LENGTH OF
LESSON ASSIGNMENTS CONSIDERED
DESIRABLE BY ENROLLEES

Number and Length	High School	College	Technical	None	Total
6/20	27	7	10	9	53
10/12	22	11	9	11	53
12/10	55	17	15	13	100
20/6	109	46	44	58	257
30/4	12	7	5	6	30
40/3	9	3	8	7	27
60/2	8	0	2	3	13
120/1	2	1	0	0	3
Other	3	1	0	3	7
No Reply	9	3	4	12	28
Total	256	96	97	122	571

TABLE 13

HELP NEEDED BY ENROLLEE ON COURSE

Help Needed	High School	College	Technical	None	Total
On Every Lesson	11	1	1	4	17
On Most Lessons	15	4	3	12	34
On Some Lessons	144	39	36	52	271
On None of the Lessons	78	50	52	46	226
No Reply	8	2	5	8	23
Total	256	96	97	122	571

TABLE 13a
SOURCE OF HELP NEEDED

Source of Help	High School	College	Technical	None	Total
Shipmate	92	17	22	32	163
Division Officer	4	3	4	3	14
Educational Services Officer	7	2	2	8	19
No One	92	60	48	45	245
Other Source	18	3	7	9	37
Instructor	6	4	1	2	13
Other Books	17	4	6	11	38
Relatives	11	2	1	3	17
No Reply	9	1	6	9	25
Total	256	96	97	122	571

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SECTION FIVE

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TABLE 14
WHO HELPED ENROLLEE CHOOSE COURSE

Who Helped	High School	College	Technical	None	Total
Shipmate	4	3	4	4	15
Division Officer	3	2	0	2	7
Educational Services Officer	54	15	12	27	108
No One	102	66	74	66	308
High School Official	72	1	2	16	91
College Registrar	5	5	0	1	11
Other	14	4	4	4	26
No Reply	2	0	1	2	5
Total	256	96	97	122	571

TABLE 15
HOW DID THE ENROLLEE LEARN ABOUT USAFI

How Learn	High School	College	Technical	None	Total
Shipmates	71	25	37	40	173
Division Officer	9	2	5	7	23
Educational Services Officer	105	30	25	44	204
Plan of The Day	9	3	6	3	21
Movies	5	4	1	2	12
Bulletin Boards	23	15	14	11	63
Other Sources	32	17	8	14	71
No Reply	2	0	1	1	4
Total	256	96	97	122	571

TABLE 16

HOW DID ENROLLEE COME TO FEEL THAT USAFI
HAD ANY VALUE FOR HIM

Value Expected Because of	High School	College	Technical	None	Total
Shipmates	16	6	9	5	36
High School Official's Advice	9	2	0	2	13
College Official's Advice	2	3	0	2	7
Desire for High School Diploma	105	5	8	33	151
Desire for College Credit	7	12	0	4	23
Self Improvement	13	8	8	6	35
Other	94	56	69	57	256
No Reply	10	4	3	13	30
Total	256	96	97	122	571

TABLE 17
REASONS FOR ENROLLING

Reason	High School	College	Technical	None	Total
High School Credit	142	6	6	41	195
College Credit	17	38	5	16	76
Greater proficiency in Navy	18	18	26	13	75
Prepare re- turn civil life	39	18	31	26	114
Self improvement	37	13	24	17	91
Other	1	0	0	0	1
No reply	2	3	5	9	19
Total	256	96	97	122	571

TABLE 13

ENROLLEES' ESTIMATE OF THE VALUE
OF THE COURSE TO HIM

Enrollees' Estimate	High School	College	Technical	None	Total
Very valuable	185	62	62	66	375
Some value	57	31	26	40	154
Less value than expected	9	2	5	8	24
No value at all	1	0	1	6	8
No reply	4	1	3	2	10
Total	256	96	97	122	571

TABLE 18a
EXPLANATION OF VALUE TO ENROLLEE

Explanation	High School	College	Technical	None	Total
Helps on job	4	5	6	2	17
School credit	62	9	3	18	92
Increased understanding	5	5	5	2	17
Good review	11	5	3	4	23
Too much lab. work	0	0	0	0	0
Other	118	42	51	60	271
No reply	56	30	29	36	151
Total	256	96	97	122	571

TABLE 19

DOES THE ENROLLEE DESIRE TO TAKE OTHER COURSES

Desire	High School	College	Technical	None	Total
Yes	180	84	66	62	392
No	31	5	6	30	72
Don't know	37	5	23	21	86
No reply	8	2	2	9	21
Total	256	96	97	122	571

TABLE 20
DOES THE ENROLLEE KNOW OTHERS THAT
ARE TAKING COURSES

Knowledge of others	high School	College	Technical	None	Total
None	34	21	8	25	88
1-5	152	52	59	62	325
More than 5	65	23	26	30	144
No reply	5	0	4	5	14
Total	256	96	97	122	571

TABLE 21

HAS ENROLLEE INFLUENCED ANYONE ELSE
TO TAKE A COURSE

Influenced others	High School	College	Technical	None	Total
No one	22	8	9	14	53
Yes by work- ing on course	48	18	16	15	97
Yes by talk- ing of course	110	45	43	51	249
Don't know	74	25	28	39	166
No reply	2	0	1	3	6
Total	256	96	97	122	571

TABLE 22

DID YOUR KNOWLEDGE OF USAFI
INFLUENCE YOU TO ENLIST

USAFI Influence	High School	College	Technical	None	Total
Yes	21	2	0	4	27
To some extent	25	4	5	7	41
No	198	86	38	109	481
No reply	12	4	4	2	22
Total	256	96	97	122	571

TABLE 22a

DID YOU HEAR ABOUT USAFI BEFORE
YOU ENLISTED

When hear of USAFI	High school	College	Technical	None	Total
Yes	76	28	10	35	149
No	162	60	85	73	380
Don't remember	16	8	1	13	38
No reply	2	0	1	1	4
Total	256	96	97	122	571

TABLE 22b

DID THE USAFI PROGRAM MEET THE
ENROLLEES' EXPECTATIONS

Expectations	High School	College	Technical	None	Total
Yes it's as expected	59	21	5	29	114
Less than expected	12	4	1	9	26
Better than expected	38	9	16	15	78
Misrepresented	1	0	2	3	6
No reply	146	62	73	66	347
Total	256	96	97	122	571

TABLE 23

DOES ATTENDANCE AT SERVICE SCHOOLS RELATE
TO TAKING COURSE DEDUCTION COURSES

Attendance	High School	College	Technical	None	Total
Yes	178	83	69	82	412
No	72	10	24	29	135
No reply	6	3	4	11	24
Total	256	96	97	122	571

TABLE 24
FACTORS THAT TEND TO LESSEN INTEREST

Factors	High school	College	Technical	None	Total
None	56	26	25	33	140
Texts	30	5	11	6	52
Long lessons	13	3	2	2	20
Mail service	11	8	4	7	30
Lack of help	17	9	4	8	38
Outside interests	8	8	3	4	23
Lack of time	21	9	9	10	49
Other	76	19	26	32	153
No reply	24	9	13	20	66
Total	256	96	97	122	571

TABLE 25
CLASSIFICATION OF OTHER REMARKS

Remarks	High School	College	Technical	None	Total
Excellent	34	10	10	10	64
Good and suggestions	84	34	24	33	175
Satisfied	14	9	15	16	54
Dissatisfied	5	0	1	2	8
No comments	15	5	5	2	27
Other	20	10	10	14	54
No reply	84	28	32	45	189
Total	256	97	97	122	571

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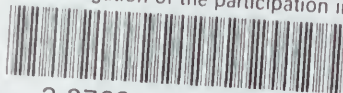
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